LTSYS

LM-75-24-G2M2F

DMX512/RDM
PUSH DIM/CCT

# Intelligent Tunable White LED Driver (Constant Voltage)

- The housing is made of V0 flame-retardant PC material, sourced from SAMSUNG/COVESTRO.
- The clamshell design and screwless type for strain-relief. The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- Supports full-command NFC fast programming. Mobile app via NFC enables changing DMX address, dimming curve, brightness range and other parameters, realizing driver data interaction.
- Support the RDM remote Device Management Protocol.
- Provides two-channel independent SELV outputs.
- Supports DMX512/RDM, PUSH DIM/CCT and corridor light DIM/CCT.
- Constant power design ensures consistent brightness when adjusting different color temperatures.
- Supports deep dimming from 0–100%, with a minimum dimming level of 0.01%.
- It is equipped with a soft-start gradually brightening function, making the visual experience more comfortable for the human eye.
- Supports Over-the-Air (OTA) online firmware updates for devices
- Complies with the EU ERP Directive on energy efficiency, with no-load power consumption < 0.5W and network standby power consumption < 0.5W
- Innovative thermal management technology intelligently protects the life of the LED driver.
- Over-heat / Over voltage / Over load / Short circuit protection, recover automatically.
- Suitable for ClassI/II/IIIindoor light fixtures.
- Designed for a service life exceeding 100,000 hours under normal operating conditions.
- 5-year warranty (Rubycon capacitor).

RDM
DMX

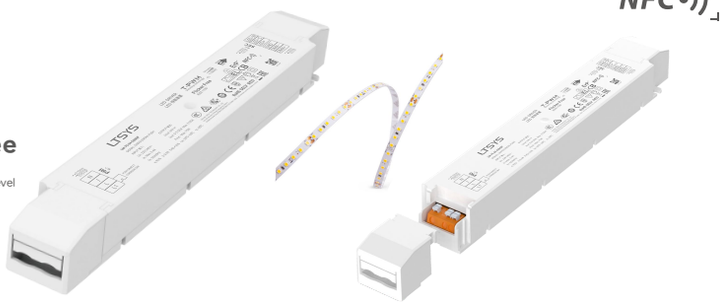
DIM/CCT

**Flicker-Free**
IEEE 1789
Achieve the exemption level

Dimmable:
1:10000

CORRIDOR DIM

NFC



ErP RED SELV RoHS

The certification icon represents undergoing certification applications only, and final certification qualification subject to actual product

PWM Digital dimming

Over Temp. Protection

Over voltage protection

Over Load Protection

Short Circuit Protection

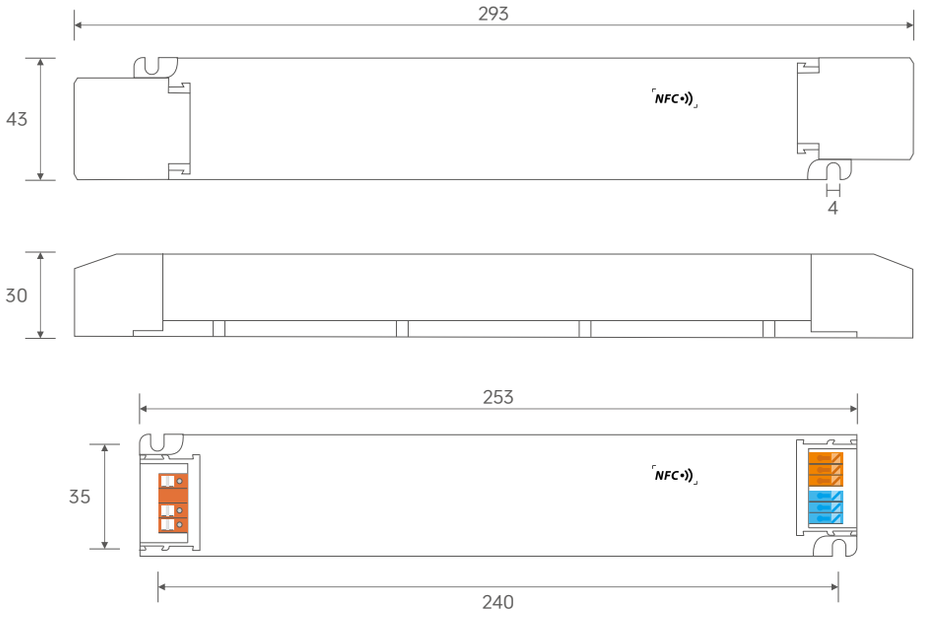
## Technical Specs

| Model | | LM-75-24-G2M2F | | |
|---|---|---|---|---|
| FEATURES | Output Type | Constant Voltage | | |
| | Dimming Interface | DMX512/RDM, PUSH DIM/CCT | | |
| | Output Feature | Isolation | | |
| | Protection Grade | IP20 | | |
| | Insulation Grade | Class II (Suitable for class I /II/III light fixtures) | | |
| OUTPUT | Output Voltage | 24V⎓ | | |
| | Output Voltage Range | 24V ± 0.5V⎓ | | |
| | Output Current | Max. 3.125A | | |
| | Output Power | Max. 75W | | |
| | Output Power Range | 0-75W | | |
| | Strobe Level | High frequency exemption level | | |
| | Dimming Range | 0-100%, down to 0.01% | | |
| | Overload Power Limitation | ≥102% | | |
| | Ripple | ≤300mV | | |
| | PWM Frequency | 300-22000Hz | | |
| INPUT | AC Voltage Range | 220-240V~ | | |
| | DC Voltage Range | 220-240V⎓ (EMI needs to be evaluated after the luminaire is installed) | | |
| | Frequency | 50/60Hz | | |
| | Input Current | Max. 0.4A/230V~ | | |
| | Power Factor | PF>0.98/230V~ (at full load) | | |
| | THD | THD<10%@ 230V~ (at full load) | | |
| | Efficiency (Typ.) | 92% | | |
| | Standby Power Loss | < 0.5W | | |
| | Inrush Current | Cold start 45A(Test twidth=300us tested under 50% Ipeak)/230V~ | | |
| | Anti Surge | L-N: 2KV | | |
| | Leakage Current | Max. 0.5mA | | |
| ENVIRONMENT | Working Temperature | ta: -20 ~ 50℃ tc: 80℃ | | |
| | Working Humidity | 20 ~ 95%RH, non-condensing | | |
| | Storage Temperature/Humidity | -40 ~ 80℃, 10~95%RH | | |
| | Temperature Coefficient | ±0.03%/℃(0-50℃) | | |
| | Vibration | 10-500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively | | |
| PROTECTION | Overload Protection | Shut down the output when rated power≥102%, auto recovers | | |
| | Overheat Protection | Intelligently adjust or turn off the output current if the PCB temperature ≥110°C, and recover automatically | | |
| | Short Circuit Protection | Enter hiccup mode if short circuit occurs, and recover automatically | | |
| | Overvoltage Protection | Shut down the output when no-load voltage≥28V, and recover automatically | | |
| SAFETY & EMC | Withstand Voltage | I/P-O/P: 3750V~ | | |
| | Insulation Resistance | I/P-O/P: 100MΩ/500VDC/25°C/70%RH | | |
| | SafetyStandards | CCC | China | GB19510.1, GB19510.14, GB19510.213 |
| | | TUV | Germany | EN61347-1, EN61347-2-13, EN62493 |
| | | CB | CB MEMBER STATES | IEC61347-1, IEC61347-2-13 |
| | | CE | European Union | EN61347-1, EN61347-2-13, EN62384 |
| | | EAC | Russia | IEC61347-1, IEC61347-2-13 |
| | | RCM | Australia | AS 61347-1, AS 61347-2-13 |
| | | ENEC | Europe | EN61347-1, EN61347-2-13, EN62384 |
| | EMC Emission | CCC | China | GB/T17743, GB17625.1 |
| | | CE | European Union | EN55015, EN61000-3-2, EN61000-3-3, EN61547 |
| | | EAC | Russia | IEC62493, IEC61547, EH55015 |
| | | RCM | Australia | EN55015, EN61000-3-2, EN61000-3-3, EN61547 |
| | EMC Immunity | EN61000-4-2,3,4,5,6,8,11,EN61547 | | |
| ErP | Power Consumption | Networked standby | < 0.5W(After shutdown by command) | |
| | | No-load power consumption | < 0.5W (when no luminaire is connected) | |
| | Flicker/Stroboscopic Effect | IEEE1789 | Meet IEEE 1789 standard/High frequency exemption level | |
| | | CIE SVM | PstLM≤1.0, SVM≤0.4 | |
| | DF | Phase factor | DF≥0.9 | |
| OTHERS | Weight(N.W.) | 290g±10g | | |
| | Dimensions | 293×43×30mm(L×W×H) | | |

This driver is suitable for connecting to resistor-limited LED fixtures (e.g., LED strips). If connected to fixtures with built-in constant-current ICs, it may generate instantaneous surge currents dozens of times higher, triggering overload protection (hiccup-mode flickering). For such fixtures (e.g., MR16 bulbs, buried lights, wall washers, constant-current rigid strips), please specify during ordering to enable firmware reprogramming.

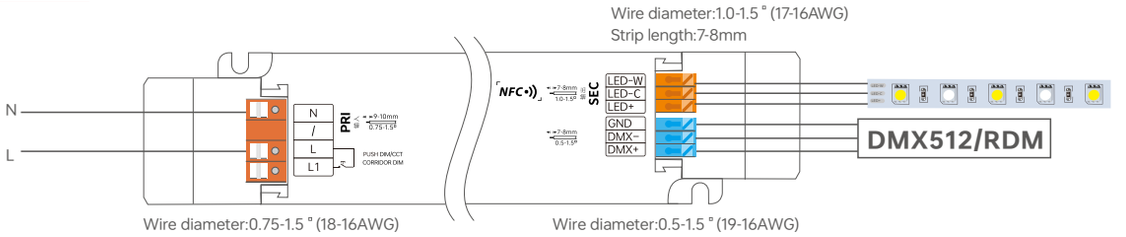
## Product Size

Unit：mm



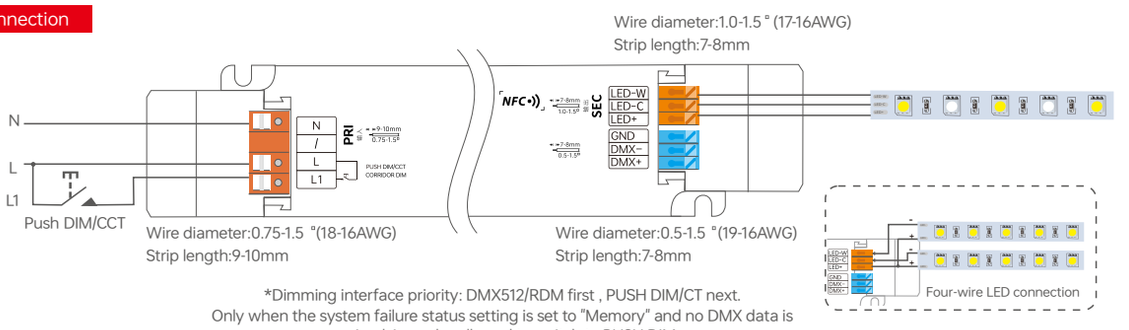

## Wiring Diagram

### DMX512/RDM Connection



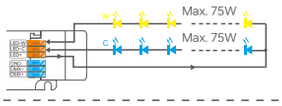

*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

### PUSH DIM Connection




*Dimming interface priority: DMX512/RDM first , PUSH DIM/CT next.
Only when the system failure status setting is set to "Memory" and no DMX data is received, it can be allowed to switch to PUSH DIM.
*The system failure status can be set through NFC lighting/WiFi-RDM.
*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

✻ Adopting constant power program design, it keeps the same brightness in color temperature dimming, twice the rated power load can be connected.
75W driver, 75W × 2CH load can be connected, the total power of the 2 channels will be kept in 75W




### Switch to PUSH Mode:

**Method 1:** If switched to corridor light mode, connect wires as per PUSH DIM wiring diagram, then short-press the reset switch 5 times within 3 seconds, long-press for 6 seconds, and short-press 5 times again within 3 seconds. The driver will automatically switch to PUSH mode.

**Method 2:** If the corridor light has been switched to the PUSH mode, it can be switched to the PUSH mode through the NFC Lighting app.

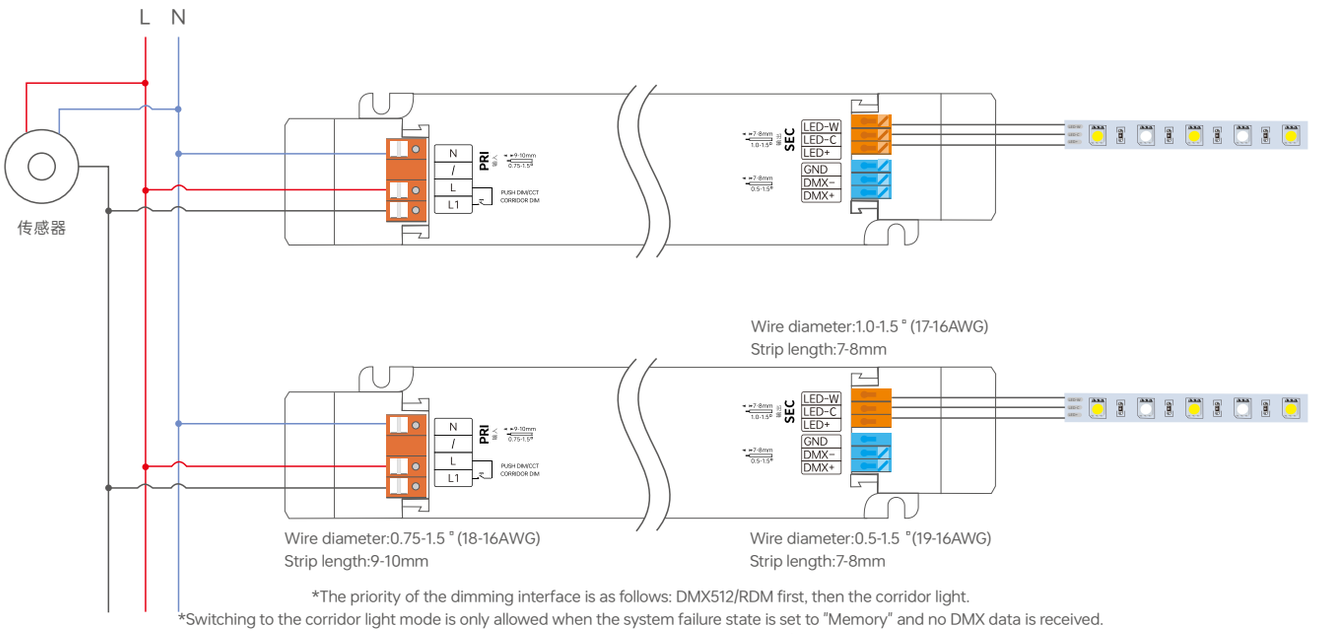
### PUSH DIM/CCT



**Reset Switch**

Short press: on/off control.
Double-click: Switch brightness/color temperature mode.
Long press: Adjust the current mode.
Dimming memory: Upon being switched on again, the light resumes the previously set brightness level.

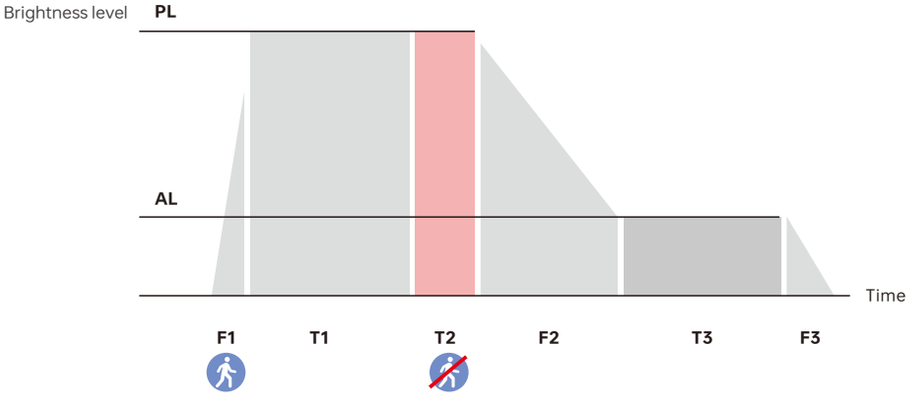
## Corridor Dimming Application



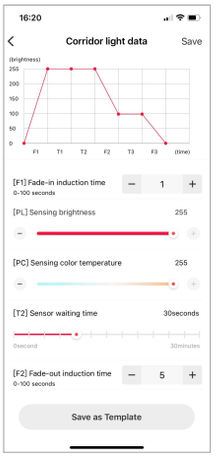

*The priority of the dimming interface is as follows: DMX512/RDM first, then the corridor light.
*Switching to the corridor light mode is only allowed when the system failure state is set to "Memory" and no DMX data is received.
*The system failure state can be set via NFC lighting/WiFi-RDM
*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

**Switch to the corridor light mode**
**Method 1:** Configure and switch the corridor light function via NFC, and the Push function will be turned off.
**Method 2:** After connecting the wires according to the corridor dimming wiring diagram, keep moving within the effective sensing area for more than 2 minutes, and it will automatically switch to the corridor dimming mode with all lights on at full brightness.
**Method 3:** After connecting the wires according to the corridor dimming wiring diagram, first replace the sensor with a common switch, then turn on the common switch and keep it conducting for 2 minutes. The driver will automatically switch to the corridor dimming mode. After that, remove the common switch and replace it with the sensor again.
**Note:**: During normal operation, it is recommended to set the hold-time of the motion sensor to the minimum.
It is necessary to select a motion sensor with an AC switch.

## Corridor Dimming Working Process



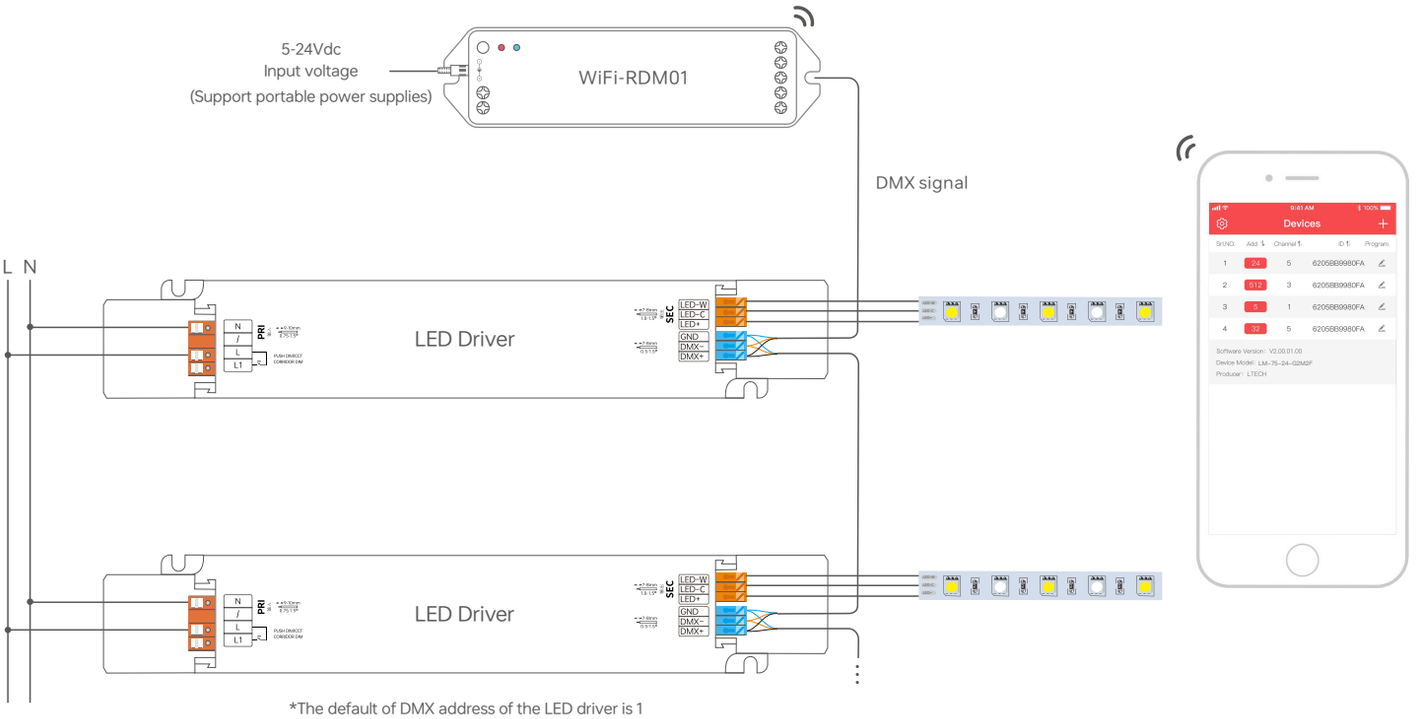

| Name | Default | Setting Range |
|---|---|---|
| (F1) Fade-in Detection Time | 1 s | 0-100 s |
| (PL) Detection Brightness | 255 | 0-255 |
| (PC) Detection Color Temperature | 0 | 0-255 |
| (T1) Induction Hold Time | Set via the sensor | |
| (T2) Delay Time | 30 s | 0 s,5 s,10 s,20 s,30 s,45 s,1 min, 2 min, 3 min,5 min,10 min,20 min,30 min |
| (F2) Gradual Exit Sensing Time | 1 s | 0-100 s |
| (AL) Hold Brightness Level | 100 | 0-255 |
| (AL) Hold Color Temperature | 0 | 0-255 |
| (T3) Detection Hold Time | 30 s | 0 s,5 s,10 s,20 s,30 s,45 s,1 min,2 mins,3 mins,5 mins, 10 mins,20 mins,30 mins,Permanent |
| (F3) Fade-out Time to Off | 1 s | 0-100 s |




**Note:** *If the light needs to maintain a low brightness hold, please set the [T3] Detection Hold Time to Permanent.
*The above parameters are set through the NFC lighting APP.

## Use with RDM Editor

The DMX driver can work with a DMX address programmer that follows the standard RDM protocol.
It is recommended to use LTECH RDM Programmer (Model: WiFi-RDM01), which can achieve more functions such as remote browsing and parameter setting.
Wiring diagramas below:

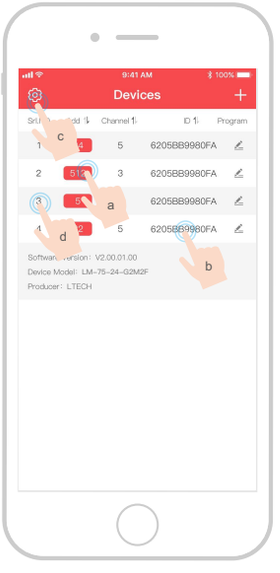


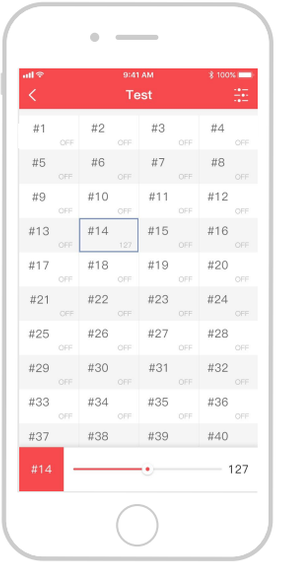

*The default of DMX address of the LED driver is 1

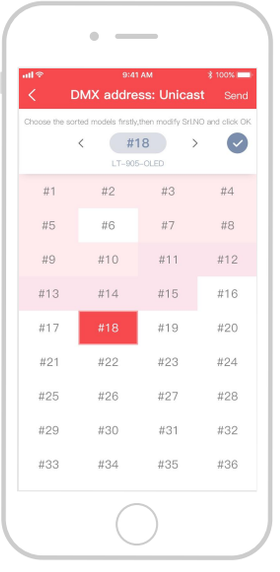
*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

## LTECH RDM Programmer APP interface introduction

Download the App with your mobile phone and connect the RDM Programmer successfully, then you are allowed to set parameters through the APP.
Please refer to the WiFi-RDM01 manual fo more details.




a : Click“Add”, edit the address in corresponding box ;
b: Click“ID”, get more product details ;
c: Click “⚙”, enter the settings interface
d: Click“No.”, issue the recognizing command.

Testing

DMX address setting

# Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).

✱ Before you begin setting the parameters of the driver, please make sure the driver is powered off.

## Read/Write the LED driver

Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver

**1.Read the LED driver**

On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC sensing area of the driver to read the driver parameters.




NFC sensing area of the driver

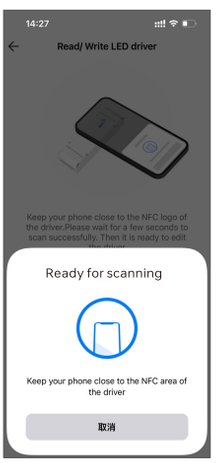
**2. Edit parameters**

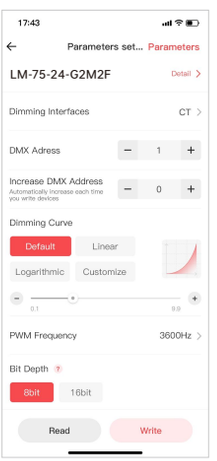
Click on [Parameter Management] to edit more advanced parameters such as DMX Address, Dimming Curve, PWM Frequency, Bit Depth, Brightness Range, Time for Fading to Dim Level, Power-on Status System Failure Level, and Corridor Lights.

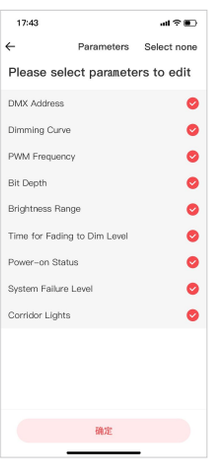
**3. Write to the drive**

After completing the parameter settings, click 【Write】in the upper right corner, and keep the programmer's sensing area close to the NFC sensing area of the driver, so the parameters can be written to the driver



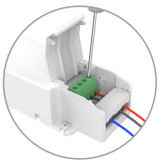



# Protective Housing Application Diagram

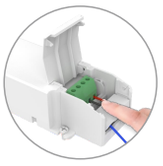
## Tension plate



1. Pry up the protecting housing in the side plate position with a tool.



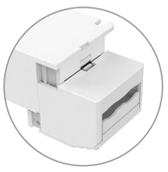
2. Connect to electrical wires with a screwdriver as wiring diagram shows.

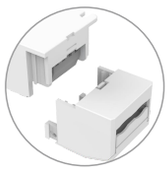


3. Press down the tension plate to fix the the electrical wires, then close the protective housing.

## Remove the protective housing

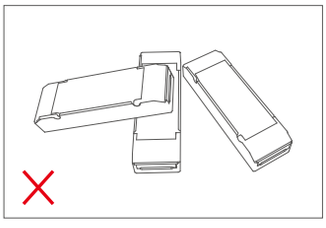


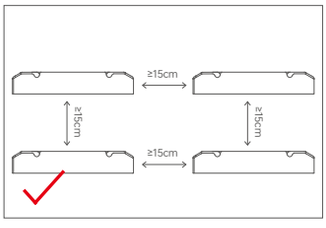




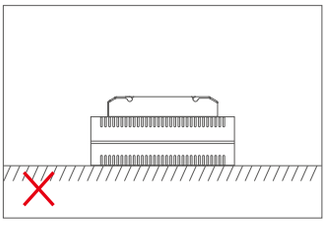
Pull the housing left and right from the bottom to remove it.

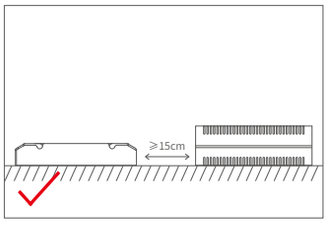
# Installation Precautions



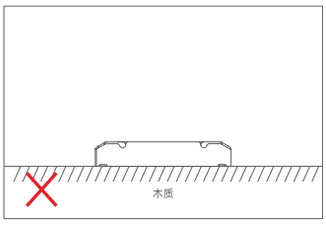


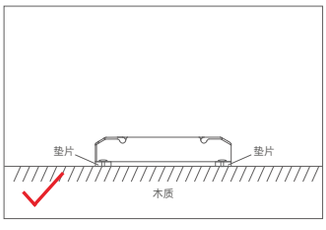

Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation and the lifespan of the products.





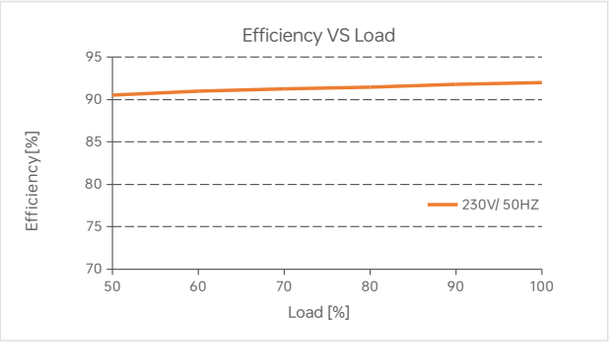

Please not place the products on power supplies. The distance between the product and the power supplies should be ≥15cm so as not to aśect heat dissipation or shorten the lifetime of the products.

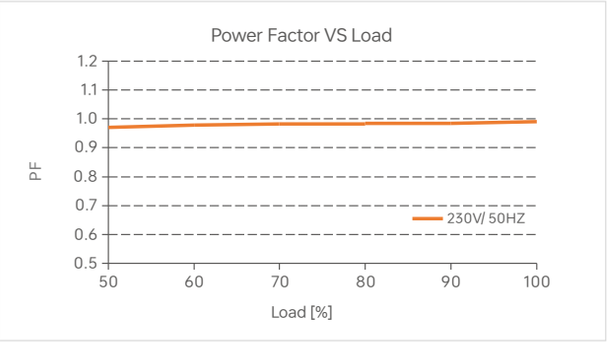


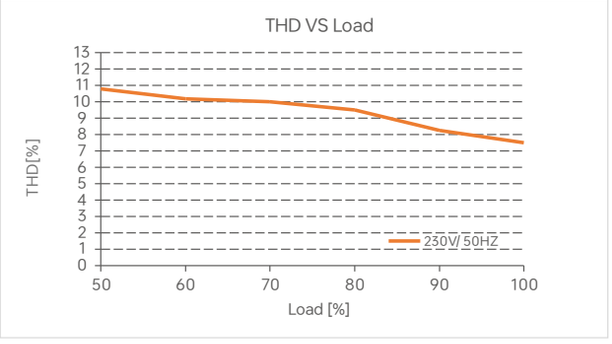



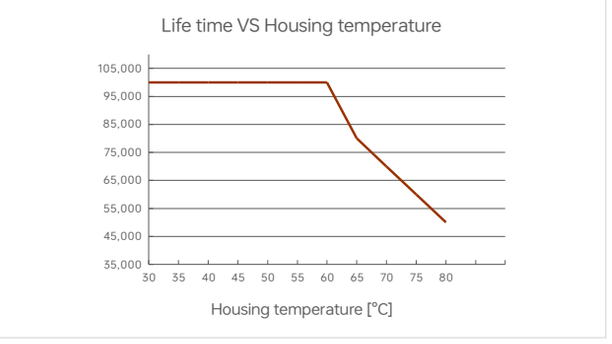

Do not fix the product screws tightly against the wooden board. Instead, add a washer with a thickness of ≥ 7mm under the fixing screws. Leaving some gaps can effectively dissipate heat, preventing any impact on the product's heat dissipation performance and service life.

## Relationship Diagrams




LM-75-24-G2M2F

## Surge Current & Corresponding Miniature Circuit Breaker (MCB) Load Capacity Table

| MCB Model | B10 | B13 | B16 | B20 | B25 | C10 | C13 | C16 | C20 | C25 | D10 | D13 | D16 | D20 | D25 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Load Capacity | 5 | 7 | 8 | 10 | 13 | 8 | 9 | 10 | 12 | 15 | 11 | 12 | 13 | 16 | 19 |

Remarks:

1. Test Conditions: Cold start 45A(Test twidth=300us tested under 50% Ipeak)/230V~.
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3. It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined based on field conditions.
4. If the ambient temperature exceeds 30°C or multiple MCBs are installed side by side, the number of installed drivers must be reduced and recalculated accordingly.
5. Electricians typically use Type B MCBs for residential lighting and Type C MCBs for commercial lighting applications.
6. Different testing equipment may yield variations in measured current peaks and pulse widths. Always use professional-grade instruments for accurate testing.

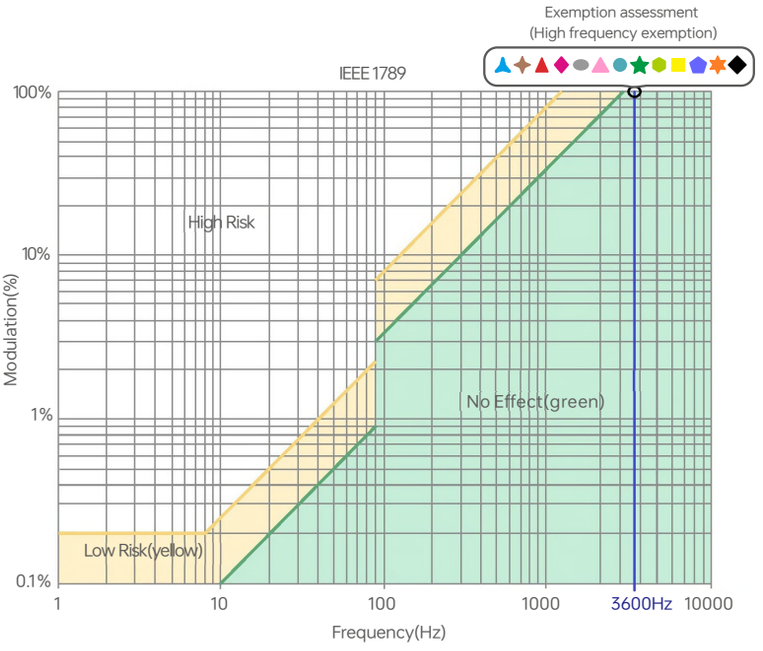
## Flicker Test Table

IEEE 1789

| Limit Value of Modulation in Low Risk Areas | |
|---|---|
| Waveform frequency of Optical output (f) | Limit value (%) |
| f ≤ 8Hz | 0.2 |
| 8Hz < f ≤ 90Hz | 0.025 × f |
| 90Hz < f ≤ 1250Hz | 0.08 × f |
| f > 1250Hz | Exemption assessment |
| **Limit Value of Modulation in No Effect Areas** | |
| Waveform frequency of Optical output (f) | Limit value (%) |
| f ≤ 10Hz | 0.1 |
| 10Hz < f ≤ 90Hz | 0.01 × f |
| 90Hz < f ≤ 3125Hz | (0.08/2.5) × f |
| f > 3125Hz | Exemption assessment (High frequency exemption) |

Brightness

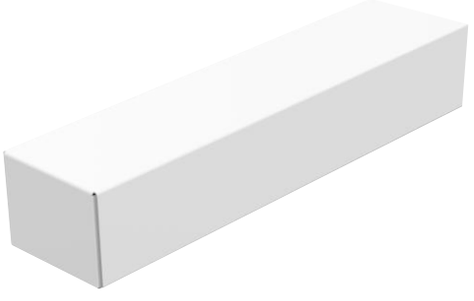
- 0.1%
- 1%
- 5%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%




## Packaging Specification

| | |
|---|---|
| Model | LM-75-24-G2M2F |
| Packaging box size | 315×215×240mm(L×W×H) |
| Quantity | 10 PCS per layer, 3 layers per box, 30 PCS per box |
| Weight | 0.29kg per PC, 9.6kg±5% per box |

## Packaging Style Drawing



Inner packaging box




Full box packaging

## Transportation and Storage

1. Transportation

Products can be shipped via vehicles, boats and planes.

During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.

2. Storage

The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.

## Attentions

- Product installation and commissioning should be done by a qualified professional.
- LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
- Good heat dissipation will prolong the working life of products. Please ensure good ventilation.
- Please check if the working voltage used complies with the parameter requirements of products.
- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

✻ This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.

## Warranty Agreement

- Warranty periods from the date of delivery: 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.